



Helmholtz-Zentrum Dresden Rossendorf | PF 51 01 19 | D-01314 Dresden

Members of the User Consortium for the "Helmholtz-Beamline" at the European XFEL

## Institut für Strahlenphysik

Prof. Dr. Thomas Cowan Direktor Tel +49 351 260-2700 Fax +49 351 260-3700 t.cowan@hzdr.de

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RE: User Consortium Approval by European XFEL, and Next Steps

## Dear Colleagues:

As the autumn semester begins, I would like to welcome you back from the summer vacation season with this formal notification that our joint proposal for a User Consortium (UC) for the "Helmholtz Beamline" at the European XFEL has been approved.

Based on your many valuable inputs, our proposal was submitted to the European XFEL in late March. It was reviewed positively by the XFEL Science Advisory Committee in mid-May and referred to the XFEL Council in late-June. Formal approval was communicated by the XFEL Management Board in mid July.

"The Management Board strongly supports the proposal. The provision of the additional instrumentation as part of the HED instrument is world-unique in combining high-power laser and pulsed magnet facilities with an X-ray FEL."

We have therefore received formal approval to integrate high-power lasers and pulsed magnets with the European XFEL, and to operate these as a user facility. Our UC shall receive priority access to XFEL beamtime, based on our final total level of contribution. The path is now cleared to apply for funding, and to enter into formal collaboration agreements with one another to support our activities within this Consortium.

I wish to thank each and every Research Group that contributed to this proposal through your strong expressions of interest to collaborate. (A special thanks to those who help write the proposal document.) As of the proposal submission date, we numbered 85 groups from 65 institutions in 15 countries, with over 350 faculty and scientists. In the meantime, several additional groups have requested to join the User Consortium.

As a community, we therefore have the opportunity to establish a truly international platform at the European XFEL, which will benefit many research areas in a unique multi-disciplinary fashion.

Helmholtz-Zentrum Dresden-Rossendorf e.V.

Besucheranschrift: Bautzner Landstraße 400 D-01328 Dresden http://www.hzdr.de

## Vorstand

Prof. Dr. Dr. h. c. Roland Sauerbrey Prof. Dr. Dr. h. c. Peter Joehnk

Registergericht: Amtsgericht Dresden Registernummer: VR 1693

Bankverbindung: Commerzbank AG Konto 0402 657 300 BLZ 850 800 00 SWIFT DRESDEFF850 IBAN DE42 8508 0000 0402 6573 00

Ust.-Nr. DE 140213784









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Copies of the User Consortium proposal, the acceptance letter by the European XFEL, the letters of support from the User Consortium members, and the presentations that I provided on behalf of the User Consortium to the XFEL SAC, can be downloaded from our website at:

http://www.hzdr.de/hgfbeamline (follow the link to "User Consortium Documents").

## **Next Steps**

The approval by the European XFEL allows us to now formally pursue funding. This requires the preparation of a full Scientific Case, and later a Technical Design. In the near term, we must develop and communicate our implementation and funding strategy to the European XFEL.

The Technical Design will require choices to be made concerning laser technologies and architecture. These are still open, and must reflect both the scientific needs of the UC, and their suitability for routine operation as a user facility. For this reason, the XFEL SAC recommended that the UC consider the scientific benefit of increasing from the 100 TW to PW power level, as well as 100 J at high rep rate versus kJ shot-on-demand for the ns laser system.

The funding proposals will be strongest if we unite as a community, and document the level of contribution by individual UC members or by any international partners. In addition to pledges of in-kind equipment or instrumentation, we would like to invite partner groups to contribute to the operations. This can be done by siting a technician, post-doc or advanced graduate student at the facility on a long-term basis (6 months minimum), to assist in the routine operations. Such contributions to operations will qualify for credit towards priority XFEL access, in the same way as equipment.

I will be in contact with you individually to discuss these issues.

Once again, thank you all for your strong interest and support of this project. I look forward to a long and successful scientific collaboration with each of you.

Best regards,

Prof. Dr. Thomas E. Cowan

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Technische Universität Dresden